

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for controlling a powertrain coupled to a vehicle, the powertrain having an internal combustion engine coupled to a transmission, the vehicle operated by a driver, the method comprising:

determining a desired vehicle speed deceleration trajectory in response to a release of an accelerator pedal by said driver, where desired engine output torque changes from positive to negative based on said release, and during said release:

adjusting an engine operating parameter to maintain positive powertrain output torque based on a determination of whether an actual vehicle trajectory is below said desired vehicle trajectory; and

adjusting said engine operating parameter to transition from positive powertrain output torque to negative powertrain output torque based on a determination of whether said actual vehicle trajectory is above said desired vehicle trajectory.

2. (original) The method recited in Claim 1 further comprising limiting powertrain output rate of change during said transition.

3. (original) The method recited in Claim 1 wherein said step of adjusting said engine operating parameter to transition from positive powertrain output to negative powertrain output further comprises adjusting said engine operating parameter to transition from positive powertrain output to negative powertrain output when said actual vehicle trajectory is above said desired vehicle trajectory by a predetermined amount.

4. (original) The method recited in Claim 1 wherein said vehicle trajectory is a vehicle speed trajectory.

5. (withdrawn)

6. (original) The method recited in Claim 1, wherein the engine is coupled to the transmission via a torque converter, wherein said positive powertrain output is maintained by maintaining torque converter input speed greater than torque converter output speed.

7. (original) The method recited in Claim 1 wherein said desired vehicle trajectory is based on vehicle and engine operating conditions.

8. (original) The method recited in Claim 1 wherein said desired vehicle trajectory is based on a position of a transmission lever.

9. (previously amended) The method recited Claim 8 wherein said lever selects between at least the following gears: reverse, neutral, a first forward, and a second forward.

10. (canceled)

11. (original) The method recited in Claim 1, wherein the engine is coupled to the transmission via a torque converter, wherein said torque converter is unlocked while maintaining positive powertrain output and then locked after transitioning from positive to negative powertrain output.

12. (previously amended) The method recited in claim 1 further comprising the step of controlling powertrain output to a required negative powertrain output to maintain said vehicle trajectory at or below said desired vehicle trajectory.

13-17. (withdrawn)

18. (currently amended) A method for controlling a powertrain coupled to a vehicle, the powertrain having an

internal combustion engine coupled to a transmission, the vehicle operated by a driver, the method comprising:

determining a desired vehicle speed deceleration trajectory in response to a release of an accelerator pedal by said driver, where desired engine output torque changes from positive to negative based on said release, and during said release:

adjusting an engine torque to maintain positive powertrain output torque when an actual vehicle speed trajectory is below said desired vehicle speed trajectory; and

adjusting said engine torque to transition from positive powertrain output torque to negative powertrain output torque when said actual vehicle speed trajectory is above said desired vehicle speed trajectory.

19. (original) The method recited in Claim 18 wherein said desired vehicle speed trajectory is based on a vehicle operating parameter.